

Reliability Standard Audit Worksheet¹

EOP-005-3 – System Restoration from Blackstart Resources

This section to be completed by the Compliance Enforcement Authority.

Audit ID: Audit ID if available; or REG-NCRnnnnn-YYYYMMDD
Registered Entity: Registered name of entity being audited
NCR Number: NCRnnnnn
Compliance Enforcement Authority: Region or NERC performing audit
Compliance Assessment Date(s)²: Month DD, YYYY, to Month DD, YYYY
Compliance Monitoring Method: Audit
Names of Auditors: Supplied by CEA

Applicability of Requirements

	BA	DP	GO	GOP	IA	LSE	PA	RC	RP	RSG	TO	TOP	TP	TSP
R1												X		
R2												X		
R3												X		
R4												X		
R5												X		
R6												X		
R7												X		
R8												X		
R9		X ³									X ³	X ³		
R10												X		
R11				X ⁴								X		
R12				X ⁴										
R13				X ⁴										
R14				X ⁴										
R15				X ⁴										

¹ NERC developed this Reliability Standard Audit Worksheet (RSAW) language in order to facilitate NERC’s and the Regional Entities’ assessment of a registered entity’s compliance with this Reliability Standard. The NERC RSAW language is written to specific versions of each NERC Reliability Standard. Entities using this RSAW should choose the version of the RSAW applicable to the Reliability Standard being assessed. While the information included in this RSAW provides some of the methodology that NERC has elected to use to assess compliance with the requirements of the Reliability Standard, this document should not be treated as a substitute for the Reliability Standard or viewed as additional Reliability Standard requirements. In all cases, the Regional Entity should rely on the language contained in the Reliability Standard itself, and not on the language contained in this RSAW, to determine compliance with the Reliability Standard. NERC’s Reliability Standards can be found on NERC’s website. Additionally, NERC Reliability Standards are updated frequently, and this RSAW may not necessarily be updated with the same frequency. Therefore, it is imperative that entities treat this RSAW as a reference document only, and not as a substitute or replacement for the Reliability Standard. It is the responsibility of the registered entity to verify its compliance with the latest approved version of the Reliability Standards, by the applicable governmental authority, relevant to its registration status.

The NERC RSAW language contained within this document provides a non-exclusive list, for informational purposes only, of examples of the types of evidence a registered entity may produce or may be asked to produce to demonstrate compliance with the Reliability Standard. A registered entity’s adherence to the examples contained within this RSAW does not necessarily constitute compliance with the applicable Reliability Standard, and NERC and the Regional Entity using this RSAW reserves the right to request additional evidence from the registered entity that is not included in this RSAW. Additionally, this RSAW includes excerpts from FERC Orders and other regulatory references. The FERC Order cites are provided for ease of reference only, and this document does not necessarily include all applicable Order provisions. In the event of a discrepancy between FERC Orders, and the language included in this document, FERC Orders shall prevail.

² Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs.

³ That is identified in the Transmission Operators restoration plan.

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R16				X											
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Findings

(This section to be completed by the Compliance Enforcement Authority)

Req.	Finding	Summary and Documentation	Functions Monitored
R1			
R2			
R3			
R4			
R5			
R6			
R7			
R8			
R9			
R10			
R11			
R12			
R13			
R14			
R15			
R16			

Req.	Areas of Concern

Req.	Recommendations

Req.	Positive Observations

Subject Matter Experts

Identify Subject Matter Expert(s) responsible for this Reliability Standard. (Insert additional rows if necessary)

Registered Entity Response (Required):

SME Name	Title	Organization	Requirement(s)

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R1 Supporting Evidence and Documentation

- R1.** Each Transmission Operator shall develop and implement a restoration plan approved by its Reliability Coordinator. The restoration plan shall allow for restoring the Transmission Operator’s System following a Disturbance in which one or more areas of the Bulk Electric System (BES) shuts down and the use of Blackstart Resources is required to restore the shutdown area to service. The restoration plan shall include:
- 1.1.** Strategies for system restoration that are coordinated with the Reliability Coordinator’s high level strategy for restoring the Interconnection.
 - 1.2.** A description of how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.
 - 1.3.** Procedures for restoring interconnections with other Transmission Operators under the direction of the Reliability Coordinator.
 - 1.4.** Identification of each Blackstart Resource and its characteristics including but not limited to the following: the name of the Blackstart Resource, location, megawatt and megavar capacity, and type of unit.
 - 1.5.** Identification of Cranking Paths and initial switching requirements between each Blackstart Resource and the unit(s) to be started.
 - 1.6.** Identification of acceptable operating voltage and frequency limits during restoration.
 - 1.7.** Operating Processes to reestablish connections within the Transmission Operator’s System for areas that have been restored and are prepared for reconnection.
 - 1.8.** Operating Processes to restore Loads required to restore the System, such as station service for substations, units to be restarted or stabilized, the Load needed to stabilize generation and frequency, and provide voltage control.
 - 1.9.** Operating Processes for transferring authority back to the Balancing Authority in accordance with the Reliability Coordinator’s criteria.
- M1.** Each Transmission Operator shall have a dated, documented System restoration plan developed in accordance with Requirement R1 that has been approved by its Reliability Coordinator as shown with the documented approval from its Reliability Coordinator and will have evidence, such as operator logs, voice recordings or other operating documentation, voice recordings or other communication documentation to show that its restoration plan was implemented for times when a Disturbance has occurred, in accordance with Requirement R1.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

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Evidence Requested¹:

Provide the following evidence, or other evidence to demonstrate compliance.
The entity's most recent restoration plan with revision history
Documented approval from its Reliability Coordinator
Times that Disturbances have occurred and evidence that the restoration plan was implemented

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R1

This section to be completed by the Compliance Enforcement Authority

	Verify that the restoration plan was implemented (such as during Disturbances)
	Verify each Transmission Operator has a dated, documented System restoration plan developed in accordance with R1 that has been approved by its Reliability Coordinator as shown with the documented approval from its Reliability Coordinator.
	Verify the restoration plan includes:
	(Part 1.1) Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy for restoring the Interconnection.
	(Part 1.2) A description of how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.
	(Part 1.3) Procedures for restoring interconnections with other Transmission Operators under the direction of the Reliability Coordinator.
	(Part 1.4) Identification of each Blackstart Resource and its characteristics including but not limited to the following:
	(Part 1.4) The name of each Blackstart Resource,
	(Part 1.4) Location of each Blackstart Resource,

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	(Part 1.4) Megawatt and megavar capacity of each Blackstart Resource, and
	(Part 1.4) Type of each Blackstart Resource.
	(Part 1.5) Identification of Cranking Paths and initial switching requirements between each Blackstart Resource and the unit(s) to be started.
	(Part 1.6) Identification of acceptable operating voltage and frequency limits during restoration.
	(Part 1.7) Operating Processes to reestablish connections within the Transmission Operator's System for areas that have been restored and are prepared for reconnection.
	(Part 1.8) Operating Processes to restore Loads required to restore the System, such as station service for substations, units to be restarted or stabilized, the Load needed to stabilize generation and frequency, and provide voltage control.
	(Part 1.9) Operating Processes for transferring authority back to the Balancing Authority in accordance with the Reliability Coordinator's criteria.

Note to Auditor:

Auditor Notes:

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R2 Supporting Evidence and Documentation

- R2.** Each Transmission Operator shall provide the entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the effective date of the plan.
- M2.** Each Transmission Operator shall have evidence such as dated electronic receipts or registered mail receipts that it provided the entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the effective date of the plan in accordance with Requirement R2.

Registered Entity Response (Required):

Question: Have there been any changes to the approved restoration plan that resulted in changes to the identified entities' roles and specific tasks? Yes No

Provide an explanation in the Compliance Narrative section.

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested¹:

Provide the following evidence, or other evidence to demonstrate compliance.
The entity's most recent restoration plan with revision history
Dated electronic receipts or registered mail receipts that it provided the entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R2

This section to be completed by the Compliance Enforcement Authority

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	Has responded to the applicability question above and provided evidence of compliance if the response was 'yes.'
	Had changes to the approved restoration plan.
	Has notified entities identified in its approved restoration plan of any changes to their roles and specific tasks.
	Has made notification of any changes of roles and specific tasks prior to the effective date of the restoration plan.
Note to Auditor: Evidence may include, but is not limited to, dated electronic receipts or registered mail receipts.	

Auditor Notes:

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R3 Supporting Evidence and Documentation

- R3.** Each Transmission Operator shall review its restoration plan and submit it to its Reliability Coordinator at least once each 15 calendar months on a mutually-agreed, predetermined schedule.
- M3.** Each Transmission Operator shall have documentation such as a dated review signature sheet, revision histories, dated electronic receipts, or registered mail receipts, that it has at least once each 15 calendar months reviewed and submitted the Transmission Operator’s restoration plan to its Reliability Coordinator in accordance with Requirement R3.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
The mutually-agreed, predetermined schedule for submitting the entity’s restoration plan to its Reliability Coordinator.
Evidence of entity’s review of its restoration plan
Evidence of submission of the entity’s reviewed restoration plan to its Reliability Coordinator

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R3

This section to be completed by the Compliance Enforcement Authority

	Verify the restoration plan was reviewed at least once each 15 calendar months.
	Verify the restoration plan was submitted to its Reliability Coordinator on a mutually agreed,

predetermined schedule.

Note to Auditor: Evidence may include, but is not limited to, a dated review signature sheet, revision histories, dated electronic receipts, or registered mail receipts.

Auditor Notes:

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R4 Supporting Evidence and Documentation

R4. Each Transmission Operator shall update and submit to its Reliability Coordinator for approval of its restoration plan to reflect System modifications that would change the ability to implement its restoration plan, as follows:

- 4.1** No more than 90 calendar days after the Transmission Operator identifies any unplanned System modifications; and
- 4.2** No less than 30 calendar days prior to the Transmission Operator’s implementation of planned System modifications.

M4. Each Transmission Operator shall have documentation such as dated review signature sheets, revision histories, dated electronic receipts, or registered mail receipts, that it has updated its restoration plan and submitted it to its Reliability Coordinator in accordance with Requirement R4.

Registered Entity Response (Required):

Question: Were there any planned or unplanned System modifications that would change the ability to implement its restoration plan? Yes No

Provide an explanation in the Compliance Narrative section.

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
Evidence that the restoration plan was updated and submitted to its Reliability Coordinator within 90 calendar days after identifying unplanned changes.
Evidence the restoration plan was updated and submitted to its Reliability Coordinator no less than 30 calendar days prior to the implementation of planned System modifications.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R4

This section to be completed by the Compliance Enforcement Authority

	Has responded to the applicability question and provided evidence of compliance if the response was 'yes.'
	Verify the entity updated and submitted its restoration plan within 90 calendar days after identifying any unplanned System modifications that would change the ability to implement its restoration plan.
	Verify the entity updated and submitted its restoration plan no less than 30 days prior to the implementation of planned System modifications that would change the ability to implement its restoration plan.

Note to Auditor:

Auditor Notes:

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R5 Supporting Evidence and Documentation

R5. Each Transmission Operator shall have a copy of its latest Reliability Coordinator approved restoration plan within its primary and backup control rooms so that it is available to all of its System Operators prior to its effective date.

M5. Each Transmission Operator shall have documentation that it has made the latest Reliability Coordinator approved copy of its restoration plan, in electronic or hardcopy format, in its primary and backup control rooms and available to its System Operators prior to its effective date in accordance with Requirement R5.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

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Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
Latest Reliability Coordinator approved restoration plan
Location of the entity's primary and backup control rooms

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R5

This section to be completed by the Compliance Enforcement Authority

	Verify the entity has a copy of its latest Reliability Coordinator approved restoration plan within its primary and backup control rooms.
	Verify the copy was made available prior to its effective date.

Note to Auditor:

Auditor Notes:

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R6 Supporting Evidence and Documentation

- R6.** Each Transmission Operator shall verify through analysis of actual events, steady state and dynamic simulations, or testing that its restoration plan accomplishes its intended function. This shall be completed at least once every five years. Such analysis, simulations or testing shall verify:
- 6.1.** The capability of Blackstart Resources to meet the Real and Reactive Power requirements of the Cranking Paths and the dynamic capability to supply initial Loads.
 - 6.2.** The location and magnitude of Loads required to control voltages and frequency within acceptable operating limits.
 - 6.3.** The capability of generating resources required to control voltages and frequency within acceptable operating limits.
- M6.** Each Transmission Operator shall have documentation such as power flow outputs, that it has verified that its latest restoration plan will accomplish its intended function in accordance with Requirement R6.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
Evidence showing verification of the entity's restoration plan
Entity's restoration plan

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R6

This section to be completed by the Compliance Enforcement Authority

	Determine if the entity verified through analysis of actual events, steady state and dynamic simulations, or testing that its restoration plan accomplishes its intended function to:
	(R6.1) Verify the capability of Blackstart Resources to meet the Real and Reactive Power requirements of the Cranking Paths and the dynamic capability to supply initial Loads.
	(R6.2) Verify the location and magnitude of Loads required to control voltages and frequency within acceptable operating limits.
	(R6.3) Verify the capability of generating resources required to control voltages and frequency within acceptable operating limits.
	Verify the entity completed this analysis at least once every five years.
<p>Note to Auditor: Verify the entity has documentation such as, but not limited to, power flow outputs, demonstrating it has verified that its latest restoration plan will accomplish its intended function. Auditors should verify that the timeframe for completion of the analysis or testing contemplated in R6 does not exceed five years from the date of the last analysis or testing performed by the entity.</p> <p>Part 1.6 of the standard requires the restoration plan to include identification of acceptable operating voltage and frequency limits during restoration.</p>	

Auditor Notes:

R7 Supporting Evidence and Documentation

R7. Each Transmission Operator shall have Blackstart Resource testing requirements to verify that each Blackstart Resource is capable of meeting the requirements of its restoration plan. These Blackstart Resource testing requirements shall include:

- 7.1.** The frequency of testing such that each Blackstart Resource is tested at least once every three calendar years.
- 7.2.** A list of required tests including:
 - 7.2.1.** The ability to start the unit when isolated with no support from the BES or when designed to remain energized without connection to the remainder of the System.
 - 7.2.2.** The ability to energize a bus. If it is not possible to energize a bus during the test, the testing entity must affirm that the unit has the capability to energize a bus such as verifying that the breaker close coil relay can be energized with the voltage and frequency monitor controls disconnected from the synchronizing circuits.
- 7.3.** The minimum duration of each of the required tests.

M7. Each Transmission Operator shall have documented Blackstart Resource testing requirements in accordance with Requirement R7.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
The entity's Blackstart Resource testing requirements

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R7

This section to be completed by the Compliance Enforcement Authority

	The entity has Blackstart Resource testing requirements to verify that each Blackstart Resource is capable of meeting the requirements of the restoration plan. Testing requirements shall include:
	(Part 7.1) The frequency of testing such that each Blackstart Resource is tested at least once every three calendar years.
	(Part 7.2.1) The ability to start the unit when isolated with no support from the BES or when designed to remain energized without connection to the remainder of the System.
	(Part 7.2.2) The ability to energize a bus. If it is not possible to energize a bus during the test, the testing entity must affirm that the unit has the capability to energize a bus such as verifying that the breaker close coil relay can be energized with the voltage and frequency monitor controls disconnected from the synchronizing circuits. See Note to Auditor below.
	(Part 7.3) The minimum duration of each of the required tests.
Note to Auditor:	

Auditor Notes:

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R8 Supporting Evidence and Documentation

R8. Each Transmission Operator shall include within its operations training program, System restoration training at least once each 15 calendar months for its System Operators. This training program shall include training on the following:

- 8.1.** System restoration plan including coordination with the Reliability Coordinator and Generator Operators included in the restoration plan.
- 8.2.** Restoration priorities.
- 8.3.** Building of cranking paths.
- 8.4.** Synchronizing (re-energized sections of the System).
- 8.5.** Transition to Balancing Authority for Area Control Error and Automatic Generation Control.

M8. Each Transmission Operator shall have an electronic or hard copy of the training program material provided for its System Operators for System restoration training in accordance with Requirement R8.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
Electronic or hard copy of the training program material provided for its System Operators for System restoration training
The entity's operations training program.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

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Compliance Assessment Approach Specific to EOP-005-3, R8

This section to be completed by the Compliance Enforcement Authority

	The entity has a training program that is provided to its System Operators for System restoration training.
	The training program includes system restoration training at least once each 15 calendar months for its System Operators.
	The training program includes:
	(Part 8.1) System restoration plan including coordination with the Reliability Coordinator and Generator Operators included in the restoration plan.
	(Part 8.2) Restoration priorities.
	(Part 8.3) Building of cranking paths.
	(Part 8.4) Synchronizing (the re-energized sections of the System).
	(Part 8.5) Transition to Balancing Authority for Area Control Error and Automatic Generation Control.
Note to Auditor: Actual performance of the training is covered under PER-005.	

Auditor Notes:

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R9 Supporting Evidence and Documentation

R9. Each Transmission Operator, each applicable Transmission Owner, and each applicable Distribution Provider shall provide a minimum of two hours of System restoration training every two calendar years to their field switching personnel identified as performing unique tasks associated with the Transmission Operator’s restoration plan that are outside of their normal tasks.

M9. Each Transmission Operator, each applicable Transmission Owner, and each applicable Distribution Provider shall have an electronic or hard copy of the training program material provided to their field switching personnel for System restoration training and the corresponding training records including training dates and duration in accordance with Requirement R9.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested¹:

Provide the following evidence, or other evidence to demonstrate compliance.
Electronic or hard copy of the training program material provided to the entity’s field switching personnel for System restoration training
Corresponding training records including training dates and duration

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R9

This section to be completed by the Compliance Enforcement Authority

	The entity identified field switching personnel performing unique tasks associated with the restoration plan that are outside of their normal tasks.
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Field switching personnel performing unique tasks, that are outside of their normal tasks, associated with the restoration plan receive a minimum of two hours of System restoration training every two calendar years.

Note to Auditor: Evidence may include, but is not limited to, a copy of training records/materials with training dates, topic, attendees and duration.

Auditor Notes:

[Redacted area for Auditor Notes]

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R10 Supporting Evidence and Documentation

R10. Each Transmission Operator shall participate in its Reliability Coordinator’s restoration drills, exercises, or simulations as requested by its Reliability Coordinator.

M10. Each Transmission Operator shall have evidence that it participated in the Reliability Coordinator’s restoration drills, exercises, or simulations as requested in accordance with Requirement R10.

Registered Entity Response (Required):

Question: Has the entity been requested by the Reliability Coordinator to participate in its restoration drills, exercises, or simulations? Yes No

Provide an explanation in the Compliance Narrative section.

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
If applicable, evidence of participation in restoration drills, exercises, or simulations

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R10

This section to be completed by the Compliance Enforcement Authority

	Verify the entity has responded to the applicability question and provided evidence of compliance if the response was yes.
	Validate that the entity, as requested, participated in the Reliability Coordinator’s restoration drills, exercises, or simulations. See Note to Auditor below.

Note to Auditor: An example of evidence may include, but is not limited to, logs. Note that EOP-006-3

requires Reliability Coordinators to request each Transmission Operator identified in its restoration plan and each Generator Operator identified in the Transmission Operators' restoration plans to participate in a drill, exercise, or simulation at least once every two calendar years.

Auditor Notes:

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R11 Supporting Evidence and Documentation

R11. Each Transmission Operator and each Generator Operator with a Blackstart Resource shall have written Blackstart Resource Agreements or mutually agreed upon procedures or protocols, specifying the terms and conditions of their arrangement. Such Agreements shall include references to the Blackstart Resource testing requirements.

M11. Each Transmission Operator and Generator Operator with a Blackstart Resource shall have the dated Blackstart Resource Agreements or mutually agreed upon procedures or protocols in accordance with Requirement R11.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated Blackstart Resource Agreements or mutually agreed upon procedures or protocols

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R11

This section to be completed by the Compliance Enforcement Authority

	Verify that the entities with a Blackstart Resource have written Blackstart Resource Agreements or mutually agreed upon procedures or protocols specifying the terms and conditions of their arrangement.
	Verify agreements include references to the Blackstart Resource testing requirements.

Note to Auditor:

Auditor Notes:

DRAFT

R12 Supporting Evidence and Documentation

R12. Each Generator Operator with a Blackstart Resource shall have documented procedures for starting each Blackstart Resource and energizing a bus.

M12. Each Generator Operator with a Blackstart Resource shall have dated documented procedures on file for starting each unit and energizing a bus in accordance with Requirement R12.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
Procedures for starting each Blackstart Resource and energizing a bus

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R12

This section to be completed by the Compliance Enforcement Authority

Verify the entity with a Blackstart Resource has documented procedures for starting each Blackstart Resource and energizing a bus.
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Note to Auditor:

Auditor Notes:

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R13 Supporting Evidence and Documentation

R13. Each Generator Operator with a Blackstart Resource shall notify its Transmission Operator of any known changes to the capabilities of that Blackstart Resource affecting the ability to meet the Transmission Operator’s restoration plan within 24 hours following such change.

M13. Each Generator Operator with a Blackstart Resource shall provide evidence, such as e-mails with receipts or registered mail receipts, showing that it notified its Transmission Operator of any known changes to its Blackstart Resource capabilities within 24 hours of such changes in accordance with Requirement R13.

Registered Entity Response (Required):

Question: Has the entity with a Blackstart Resource had any known changes to the capabilities of that Blackstart Resource affecting the ability to meet the Transmission Operator’s restoration plan?

Yes No

Provide an explanation in the Compliance Narrative section.

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested¹:

Provide the following evidence, or other evidence to demonstrate compliance.
Any known changes to the capabilities of that Blackstart Resource affecting the ability to meet the Transmission Operator’s restoration plan
E-mails with receipts or registered mail receipts, showing that it notified its Transmission Operator of any known changes to its Blackstart Resource capabilities within 24 hours of such changes

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R13

This section to be completed by the Compliance Enforcement Authority

	The entity responded to the applicability Question and provided evidence of compliance if the response was 'yes.'
	The entity with a Blackstart Resource notified its Transmission Operator of any known changes to the capabilities of that Blackstart Resource affecting the ability to meet the Transmission Operator's restoration plan within 24 hours following such change.
Note to Auditor:	

Auditor Notes:

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R14 Supporting Evidence and Documentation

R14. Each Generator Operator with a Blackstart Resource shall perform Blackstart Resource tests, and maintain records of such testing, in accordance with the testing requirements set by the Transmission Operator to verify that the Blackstart Resource can perform as specified in the restoration plan.

14.1. Testing records shall include at a minimum: name of the Blackstart Resource, unit tested, date of the test, duration of the test, time required to start the unit, an indication of any testing requirements not met under Requirement R7.

14.2. Each Generator Operator shall provide the blackstart test results within 30 calendar days following a request from its Reliability Coordinator or Transmission Operator.

M14. Each Generator Operator with a Blackstart Resource shall maintain dated documentation of its Blackstart Resource test results and shall have evidence such as e-mails with receipts or registered mail receipts, that it provided these records to its Reliability Coordinator and Transmission Operator when requested in accordance with Requirement R14.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated documentation of the entity's Blackstart Resource test results
Evidence, such as e-mails with receipts or registered mail receipts, that the entity provided these records to its Reliability Coordinator and Transmission Operator when requested

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R14

This section to be completed by the Compliance Enforcement Authority

	The entity maintains Blackstart Resource test records.
	The entity Blackstart Resource testing is in accordance with the testing requirements set by the Transmission Operator to verify that the Blackstart Resource can perform as specified in the restoration plan.
	(Part 14.1) Test records shall include at a minimum:
	(Part 14.1) Name of the Blackstart Resource unit tested.
	(Part 14.1) Date of the test.
	(Part 14.1) Duration of the test.
	(Part 14.1) Time required to start the unit.
	(Part 14.1) Any testing requirements not met under R7.
	(Part 14.2) The entity has documentation such as e-mails with receipts, or registered mail receipts, that it provided the blackstart test results within 30 calendar days following a request from its Reliability Coordinator or Transmission Operator.
Note to Auditor:	

Auditor Notes:

R15 Supporting Evidence and Documentation

R15. Each Generator Operator with a Blackstart Resource shall provide a minimum of two hours of training every two calendar years to each of its operating personnel responsible for the startup of its Blackstart Resource generation units and energizing a bus. The training program shall include training on the following:

- 15.1. System restoration plan including coordination with the Transmission Operator
- 15.2. The procedures documented in Requirement R12.

M15. Each Generator Operator with a Blackstart Resource shall have an electronic or hard copy of the training program material provided to its operating personnel responsible for the startup and synchronization of its Blackstart Resource generation units and a copy of its dated training records including training dates and durations showing that it has provided training in accordance with Requirement R15.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested:

Provide the following evidence, or other evidence to demonstrate compliance.
Electronic or hard copy of the training program material provided to its operating personnel responsible for the startup and synchronization of its Blackstart Resource generation units
Dated training records including training dates and durations showing that it has provided training

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R15

This section to be completed by the Compliance Enforcement Authority

	Verify the entity with a Blackstart Resource has provided a minimum of two hours of training every two calendar years to each of its operating personnel responsible for the startup of its Blackstart Resource generation units and energizing a bus.
	Verify the training program includes:
	(Part 15.1) System Restoration plan including coordination with the Transmission Operator.
	(Part 15.2) The procedures documented in R12 for starting a blackstart resource and energizing a bus.
Note to Auditor:	

Auditor Notes:

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R16 Supporting Evidence and Documentation

R16. Each Generator Operator shall participate in the Reliability Coordinator’s restoration drills, exercises, or simulations as requested by the Reliability Coordinator.

M16. Each Generator Operator shall have evidence, such as dated training records, that it participated in the Reliability Coordinator’s restoration drills, exercises, or simulations if requested to do so in accordance with Requirement R16.

Registered Entity Response (Required):

Question: Has the entity been requested by the Reliability Coordinator to participate in its restoration drills, exercises, or simulations? Yes No

Provide an explanation in the Compliance Narrative section.

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested¹:

Provide the following evidence, or other evidence to demonstrate compliance.
If applicable, evidence of participation in restoration drills, exercises, or simulations

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to EOP-005-3, R16

This section to be completed by the Compliance Enforcement Authority

	Verify the entity responded to the applicability question and provided evidence of compliance if the response was yes.
	Verify the entity has evidence such as, but not limited to, dated training records that it participated in the Reliability Coordinator’s restoration drills, exercises, or simulations if requested to do so.

Note to Auditor: This requirement is applicable to all Generator Operators, regardless of whether they have a Blackstart Resource.

Auditor Notes:

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Additional Information:

Reliability Standard

The full text of EOP-005-3 may be found on the NERC Web Site (www.nerc.com) under “Program Areas & Departments”, “Reliability Standards.”

In addition to the Reliability Standard, there is an applicable Implementation Plan available on the NERC Web Site.

In addition to the Reliability Standard, there is background information available on the NERC Web Site.

Capitalized terms in the Reliability Standard refer to terms in the NERC Glossary, which may be found on the NERC Web Site.

Sampling Methodology

Sampling is essential for auditing compliance with NERC Reliability Standards since it is not always possible or practical to test 100% of either the equipment, documentation, or both, associated with the full suite of enforceable standards. The Sampling Methodology Guidelines and Criteria (see NERC website), or sample guidelines, provided by the Electric Reliability Organization help to establish a minimum sample set for monitoring and enforcement uses in audits of NERC Reliability Standards.

Regulatory Language

Still needed. Order No. 749, 134 FERC ¶ 61,215 (2011)

Selected Glossary Terms

The following Glossary terms are provided for convenience only. Please refer to the NERC web site for the current enforceable terms.

Demand: 1. The rate at which electric energy is delivered to or by a system or part of a system, generally expressed in kilowatts or megawatts, at a given instant or averaged over any designated interval of time.
2. The rate at which energy is being used by the customer.

Demand-Side Management: The term for all activities or programs undertaken by Load-Serving Entity or its customers to influence the amount or timing of electricity they use.

Net Energy for Load: Net Balancing Authority Area generation, plus energy received from other Balancing Authority Areas, less energy delivered to Balancing Authority Areas through interchange. It includes Balancing Authority Area losses but excludes energy required for storage at energy storage facilities.

Total Internal Demand: The Demand of a metered system, which includes the Firm Demand, plus any controllable and dispatchable DSM Load and the Load due to the energy losses incurred within the boundary of the metered system.

Revision History for RSAW

Version	Date	Reviewers	Revision Description
1	7/8/16	NERC Compliance Assurance, RSAW Task Force	New Document

ⁱ Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.